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EXAMINER

PRYOR, M

ART UNIT

PAPER NUMBER

3743

DATE MAILED:

11/20/98

Pl ase find below and/or attached an Office communication concerning this application or proceeding.

Commissloner of Patents and Trademarks

Office Action Summary

Application No.

08/895,936

Applicant(s)

Richard Wisniewski And Leonard C. Leonard

Examiner

Matthew Pryor

Group Art Unit

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☒ Responsive to communication(s) filed on Jul 17, 1997

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-35 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-12 and 14-35 is/are rejected.

☒ Claim(s) 13 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Jan 17, 1997 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2, 5, 6, 8

☒ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 9, 10, 14-20, 22-30 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masel in view of Lundvall. Masel discloses each of the following limitations: a container (3), a structure in the container (4), a heat exchange member (16a) at least partially coupled to the interior surface of the container (every fin is at least partially coupled to interior surface of container) and a heat exchange member (16a) at least partially coupled to the structure (every fin is at least partially coupled to the structure). The only limitations not disclosed by Masel are as follows: a heating or cooling device coupled to the structure and the container. Masel does, however, disclose coupling the apparatus to a freezer, a cooling device with heat exchange fluid flowing through it, for the purpose of freezing the medium. Lundvall discloses the insertion of a structure into a container for the purpose of providing heat transfer to a medium contained therein. Because the cartridges of Masel are not useful until frozen, decreasing the amount of time required to freeze the cartridge is a desirable result. Therefore, it would have

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been obvious to one having ordinary skill in the art at the time the invention was made to further modify the thermal transfer system of Masel to include the cooling attachment of Lundvall for the purpose of decreasing the time to freeze the medium.

Regarding claims 14-20, there are no structural limitations provided by the method-of-use limitations. When considering a method-of-use claim for an apparatus, patentable weight is given to the structure on which the claimed process is carried out in determining the obviousness of that process. In re Kuehl, 177 USPQ 250. Therefore, because claims 14-20 provide no structural limitations, they are also obvious under 35 U.S.C. 103(a).

Regarding claim 10, size or volume is not ordinarily a matter of invention. In re Yount, 36 C.C.P.A. (Patents) 775, 171 F.2d 317, 80 USPQ 141. Unless the applicant discloses why it would not have been obvious to increase the size of the container in order to increase the amount of medium that could be frozen at any given time, any changes in volume are obvious. Therefore, claim 10 is obvious under 35 U.S.C. 103(a).

3. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masel in view of Lundvall as applied to claim 1 above, and further in view of Allo. Allo discloses the use of a disposable liner within heat exchangers for the purpose of maintaining optimal thermal transfer properties within the heat transfer mediums (column 1, line 45). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further

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modify the heat transfer system of Masel in view of Lundvall to include a removable liner of Allo for the purpose of maintaining the heat transfer characteristics of the structure.

4. Claims 11 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masel in view of Mekjean. Masel discloses each of the following limitations: a container (3), a structure in the container (4), a heat exchange member (16a) at least partially coupled to the interior surface of the container (every fin is at least partially coupled to interior surface of container) and a heat exchange member (16a) at least partially coupled to the structure (every fin is at least partially coupled to the structure). The only limitations not disclosed by Masel are as follows: 1) the use of heat exchange members having some form of thermal energy flowing within them for the purpose of increasing heat transfer and 2) a distal end of the first heat exchange member contacts at least a portion of a distal end of a second heat exchange member. Mekjean discloses the use of heat exchange members having a source of thermal energy flowing through them (figure 9) as well as heat exchange members having contact between their distal ends (contact between 28 and 14 on figure 3) for the purpose of increasing heat transfer. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the heat transfer system of Masel to include the heat exchanger member contact and heat exchanger member thermal loading of Mekjean for the purpose of increasing heat transfer.

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5. Claims 21 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masel in view of Lindemans. Masel discloses each of the following limitations: a container (3), a structure in the container (4), a heat exchange member (16a) at least partially coupled to the interior surface of the container (every fin is at least partially coupled to interior surface of container) and a heat exchange member (16a) at least partially coupled to the structure (every fin is at least partially coupled to the structure). The only limitations not disclosed by Masel are as follows: a biopharmaceutical product serving as the medium. Lindemans disclose a heat transfer system for a biopharmaceutical product for the purpose of freezing and thawing the medium in a controlled fashion. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the heat transfer system of Masel to include the biopharmaceutical medium of Lindemans for the purpose of quickly freezing and thawing the medium.

6. Claims 12, 32, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joshi in view of Henderson. Joshi discloses each of the following limitations: a container (21), a structure positioned in the container (38), a plurality of heat exchange members (40) at least partially coupled to the structure, having a distal end in close proximity (less than one inch) to the interior surface of the container (figure 3). Heat exchange fluid flows within the structure (column 2, line 60). The only limitation not disclosed by Joshi is as follows: heat exchange fluid flowing within the heat exchange members. Henderson discloses the use of heat exchange

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members (15) that have heat exchange fluid flowing through them. The purpose of having heat exchange fluid flow within the heat exchange elements is to increase surface area of the structure, thereby increasing the amount of heat transfer. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to further modify the heat transfer system of Joshi to include the heat exchange members with heat exchange fluid flowing through them of Henderson for the purpose of increasing heat transfer between two mediums.

Allowable Subject Matter

7. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Specifically, Hurner discloses a heat transfer system in which the container is within the range of 250 to 10,000 liters. Hetzel discloses a three fluid heat transfer system that discloses many of the applicant's claimed limitations. Linden discloses a similar system, except that Linden does not disclose a heat exchanger coupled to the external reservoir. Henderson discloses the use of a baffled jacket around a pipe assembly having spirals. Silver discloses a final heat transfer assembly that anticipates several of the applicant's claimed limitations.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Pryor whose telephone number is (703) 305-0250. The examiner can normally be reached on Monday to Friday from 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ira Lazarus, can be reached on (703) 308-1935. The fax phone number for this Group is (703) 305-3463.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1148/0858.


Matthew Pryor

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Ira S. Lazarus
Supervisory Patent Examiner
Group 3700